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NORTH AND SOUTH DAKOTA HORTICULTURE

NOVEMBER, 1950

Summer home of the late Mr. E. M. Harvey, near Pasque Knoll, where the Sioux Falls Garden club held many enjoyable picnics.

THE BLACK-BELLIED PLOVER

By

O. A. Stevens

O. A. Stevens

This species is so much like the golden plover that the two are likely to be confused. Both are black on the underparts in full plumage though the black stops abruptly a little behind the legs in the black-bellied and continues, though somewhat broken, in the golden plover. The black-bellied is grayish on the upper parts and lacks the golden flecks which are so striking in the other bird. The black-bellied is slightly the larger of the two species. Wilson said it could always be recognized by the "seemingly disproportionate size of the head and thickness of the bill". It has a distinct but very small hind toe while the golden plover has practically no hind toe. Mr. Bent says the black feathers on the under side of the wing next to the body are conspicuous in flight and are a good character for all plumages.

The black-bellied plover is very widely distributed. It nests on the tundra across Europe and Asia a well as North America. The birds from eastern Siberia and western Alaska are slightly larger than others, but most authors maintain that all belong to a single form. In winter they seem more spread out than the golden plover. They are found all the way from the Mediterranean to South Africa, in India and Australia. In America they winter from British Columbia and North Carolina to Brazil and Northern Chile. In migration they are widely distributed, not concentrated in special areas.

Mr. Bent calls this species an aristocrat among shore birds. Although so widely distributed it was not found nesting in many places nor in such large numbers as the golden plover. They are more wary and were not killed in such large numbers. The eastern hunters called them "beetleheads" and recognized them as among the most difficult bird to shoot. The young birds were less suspicious but the old ones very wary.

Nests are placed on the tundra, often on ridges from which the birds have an excellent view. They are not placed close together. One observer in Alaska reported 40 or more nests and no two of them less than a quarter of a mile apart. So well do the colors of the eggs blend with the surroundings that even the bird predators do not find the eggs readily. The eggs are a little larger than those of the golden plover and vary a great deal in color and marking. One writer says they are distinctive, having a lighter background than those of the golden plover, the spots less numerous but more evenly distributed.

The birds feed mostly on the flat left exposed by low tides where they find various kinds of small animals. At high tide they fly to the higher grassy areas where insects form their main food. Howell stated that their winter food on the Florida coast was chiefly different species of crabs and mollusks.

"THE GROVES"

By L. L. Loofbonow

Where God's first temples
They still call men to worship,
And teach them in many parables.
Now learn a parable from the Redwood tree.
He was centuries old in Abraham's Day
His life was half lived when the Star of
Bethlehem led the wise men to the Infant Savior.
Yet he stands here in our California still,
Speaking to all who have ears to hear.
These are the things he told me
The secrets that have made him the Oldest of all God's living things:

"TO BE CONTENT with small beginnings for his seed is as tiny as the mustards;
TO BE PATIENT with slow development, for he grows but a few inches each year;
TO STAND STRAIGHT for only low trees can afford to lean or stoop;
TO GROW SO TALL as to live always in the sunshine, for it is the

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Vol. 23 November, 1950 No. 11

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NEWSLANTS
By
Harry Graves

The Evergreens

Erect they stand, faces to the heavens,
Like a child at prayer with folded hands.
Ten sentinels, beautiful and strong—
The reward of sweat and toil;
The reward of love's labor.
Long after the master lies mouldering in his grave,
These evergreens bear testimony of stout heart,
And willing hand.

—(Mrs.) Lillian Hendrickson,
Fort Ransom, N. D.

H. A. Graves

The preceding poem by Mrs. Henrickson speaks for itself. It was planned for this column a couple of months ago but was unintentionally delayed. You will, no doubt, recall the report on our day at Fort Ransom in an earlier issue.

Congratulations to Dr. A. F. Yeager on his election to the presidency of the American Society of Horticultural Science at the September meetings in Columbus, Ohio. A.S.H.S. is the only national professional horticultural organization in America. The group meets at Minneapolis in 1951. The nearness of the meetings plus the fact that Dr. Yeager will be presiding should result in many of his old friends on the Northern Great Plains planning to attend.

The North Dakota Horticultural Society met in the Gardner Hotel in Fargo, October 6 and 7. Attendance was about average for an annual meeting but should have been better.

In the absence of President Ralph Smith, who has left the state, past president Rev. Ralph McNeil presided.

Reports of the Secretary and Treasurer were read and adopted. Dr. C. I. Nelson, W. R. Leslie and W. P. Baird were named to the nominating committee.

Notice was taken of the passing of Dr. N. E. Hansen of Brookings, South Dakota.

By official action, a motion prevailed that the North Dakota Horticultural Society Secretary send a message of sympathy to the Hansen family. The chair named a committee of W. R. Leslie, R. L. Wodarz and W. P. Baird to prepare such a message. This was done and the message sent by night letter.

With the conclusion of the opening business session, the subject matter program got under way with an interesting discussion on flower arranging led by Don Hoag of N.D.A.C. Don had several arrangements to illustrate his points.

Henry Biel, Stark county farmer from Lefor, next took the floor to discuss 15 plates of apples from his extensive planting of 88 trees made up of some 28 varieties. Mr. Biel's talk gave a nice balance to the program since his approach was from the standpoint of varieties adapted to the Missouri Slope. A lively discussion followed this presentation centering around the identification of certain varieties by their fruit.

R. L. Wodarz of Wyndmere followed with a discussion of his display of 35 varieties and seedlings from his Richland county orchard. Wodarz centered his talk around the need of top working marginally hardy varieties on hardy trunks such as M. baccata, Hibernal, Dolgo, etc. The Wodarz collection contained several seedlings. Several of these were seedlings of McIntosh and the well known McIntosh aroma spilled out of the meeting room and filled the lobby of the hotel. Some of these seedlings are likely to be on the market soon.

"The spirit of Dr. Yeager is in every plate of apples on this table," said Mr. Wodarz in closing. "He was a great inspiration to me."

Dr. J. H. Schultz, chairman of the Department of Horticulture at N.D. A.C., next addressed the group on the present status of horticulture at the North Dakota Agricultural College. Dr. Schultz made a special point of the need of more work in the fields of Landscape Gardening and Ornamentals. He then outlined the current projects in horticultural research at the North Dakota Agricultural Experiment Station and described the physical facilities available for horticultural work at the college.

At the conclusion of the scheduled talks, chairman McNeil called on Ernest George, Superintendent of the Great Plains Field Station and W. P. Baird, horticulterist at the same station. Both of these gentlemen responded with brief talks. Fred Weir, Extension Horticulturist for Manitoba, was next called to the floor. Mr. Weir outlined his work in horticulture in Manitoba and described the Manitoba Fruit Show to be held in Winnipeg in 1951 and Dauphin in 1952.

The afternoon session was adjourned.

At 6:30 p. m. the annual banquet arranged by a committee from the Fargo Garden Society got under way with J. H. Schultz as toastmaster. Rev. McNeil offered grace.

Following the banquet, Dr. Nelson, chairman of the nominating committee, placed the following slate in nomination: President, R. L. Wodarz, Wyndmere; vice president, Dr. J. H. Schultz, N.D.A.C., Henry Biel, Lefor; secretary, Harry Graves, Fargo; treasurer, Earl Shaw, Fargo.

Failure of any nominations from the floor resulted in this slate being elected.

Everyone enjoyed W. R. Leslie, who gave one of his unique illustrated talks. About 20 slides of new and different ornamentals growing at the Dominion Experimental Station at Morden were shown and discussed. President George Tollefson of the Fargo Garden Society made a brief talk followed by the unusual movie, "Flowers in Action." This movie was shown through the kindness of the Coca Cola Company of Moorhead, Mr. O. E. Gore, manager. "Flowers in Action" is a time lapsed movie which shows flowers emerging from the ground, blooming and dying in the matter of minutes. It also contained a section showing how carnivorous plants such as the Pitcher plants and Sundew capture their prey.

Saturday morning, three carloads of folks journeyed to the fruit planting of our new president, R. L. Wodarz. Mr. Wodarz most graciously led this interested group up and down the rows of his planting, giving

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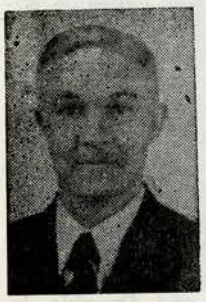
MANITOBA NEWS LETTER

By

W. R. Leslie



W. R. Leslie

Another harvest season in the Morden Station orchards rapidly nears completion as we pause for a brief glance backward over the years happenings. Like most seasons it has had its bright spots and its dull moments. The fruit yield is really the climax to the summer activities and some observations are recorded.

The strawberry led off with a far below normal crop, which ripened nearly 3 weeks later than usual. A dry summer in 1949, coupled with some root rot troubles and Cyclamen Mite injury to the crown and foliage, left the plantation in a weakened condition. Thus, far fewer fruit buds were formed by fall a year ago. After a slow backward spring start, weather conditions at blossom time were very good. Pollination and set of fruit was satisfactory, only the blossoms for a potentially heavy crop were not there. Although late, the crop ripened well to the last berry. Cool weather with a fair moisture supply has favored the production of a good crop of fall berries.

The raspberry crop was just the reverse. Early flowering varieties like Chief, Madawaska, Honeyking, Sunrise and the like, began blossoming on June 20. Conditions proved highly satisfactory for pollination and the fruit set was enormous. Moisture was adequate for the production of the heaviest raspberry crop in recent years. A very long picking season followed. Ripe berries in excellent condition were picked from basal side branches of Washington and several seedlings on September 28. The fall bearing variety September has a few ripened fruits on spring-set plants. Red, black and purple varieties have yielded well. Chief, Latham, Madawaska, Viking, Van Dyke, Ottawa, Sunrise and Honeyking were among the heaviest producers.

Currants and gooseberries had a highly productive season in all varieties. Here again, the cool, moist season favored a long harvest period. A few plump, juicy, sweet berries can still be harvested from Stephen, Red Lake and White Imperial.

In the field of wild fruits it has been a banner year. The Saskatoon, Juneberry or Shadblow gave a tremendous crop everywhere. Large berry size was attained and, like cultivated fruits, the harvest period extended a long time. Pembina berry or Highbush Cranberry, and chokecherry branches were bent to the ground with their burden of fruit.

In tree fruits the picture was varied because of the variety of material under test. While there was an abundance of blossom in nearly all departments, pollinating insects were few at flowering time. Later, when raspberries were in bloom there was an abundance of pollinators, especially the bee flies. As a result of this situation, some varieties set well and others set practically nil. It served to indicate all degrees of self fruitfulness.

Apricot escaped any frost injury after fruit setting, for the first time in 5 years. Scout showed its superiority for local conditions by producing a fair crop, while all other named introductions gave very light returns. Serveral seedlings of hybrid Manchurian apricot parentage were well loaded.

Sour cherries yielded very heavily of large, luscious, highly colored fruit . Moscow was particularly impressive, as were Bessarabian, Wragg and Montmorency. The Dwarf Bush cherry, Prunus fruticosa, excelled with an outstanding crop. This small bush has not failed to bear well every year since the planting first came into fruiting 10 years ago. The Nanking or Manchu cherries produced well. Although somewhat less dependable than the Dwarf Bush cherry, they are esteemed as having a wider usefulness. Many people enjoy them as fresh fruit as well as for juice, sauce, pies and jelly.

Plum yields varied from very heavy to light. On the whole winter survival was good. Some large-fruited hybrid plums, a Fiebing, Red Wing and Waneta killed as much as 75 per cent. Most plums of native parentage like Norther, Bounty, Dandy, Mina, Pembina and sandcherry-plum hybrids Opata, Sapa, Dura, Sapalta and Manor produced excellent crops of large, fine quality fruits. Others like Tecumseh, Fiebing, Grenville, Radisson, Red Glow and Redcoat carried a light crop scattered through the tree. The Japanese type, Prunus salicina, especially the yellow-fruited forms Ptitsin No. 9 and No. 10 continued to respond well. Mandarin, Ivanovka and Ptitsin No. 12 and No. 14 carried light crops.

The nut plantation had a good year. American and Beaked hazel or filberts, Manchu filberts; Black, Manchu and White walnuts or butternut all bore substantial crops except where walnut trees had suffered in vitality from disease in previous seasons. Two species grown for ornmental purposes, — the Russian Almond and Ohio buckeye, or American Horsechestnut, were thrifty and fruitful. Both appear well adapted to this territory.

The apple blossom period was of very short duration and later than usual. First blooms began opening on June 3. All varieties came in at once, and the last were past full bloom by June 10. A shortage of pollinating insects, strong winds during the latter part of the flowering season, and some varieties in weak condition from winter injury each contributed to a varied set of fruit. All large trees of Haralson, Duchess, Charlamoff, Manitoba Spy, and many seedlings were more or less severely injured by adverse winter conditions. It was noted that many of these trees were in a much weakened condition in the spring of 1949, presumably caused by winter desiccation in 1948-49, following heavy fruit bearing. They did not recover sufficiently to survive the prolonged low temperatures of the 1949-50 season. They bore little or no fruit. Bloom on the remaining healthy trees was bountiful. While insects were exceedingly few, some trees set a tremendous crop, suggesting a high degree of self-pollination. In this class were such varieties as Moscow Pear apple, Bode, Heyer No. 12, Battleford, M354, M360, Hibernal among apple; Rescue and Trail in applecrabs; and Florence, Osman, Columbia, Dolgo, Alex-

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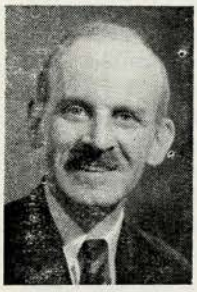
PLUM PROBLEMS

By
Percy H. Wright



P. H. Wright

The great need of orchardists in the northern Great Plains area is a new understock for Nigra and American plums—or so it seems to me after ten years of disappointment. When I settled in the northeastern part of Saskatchewan (near the town of Carrot River, on former muskeg soil), I planted out many trees of the varieties of plums then in fashion, mostly Assiniboine, Dandy, Mammoth, and a little later I added Bounty and Norther. I set out perhaps fifty trees in all, but at the present time there is not one of these trees from which I would dare to take budwood. At least three-quarters of them I know definitely to have come up from the understock, and the other quarter I am not sure of, fearing that branches of the understock have mingled with the branches of the named variety. Americana as an understock is unsatisfactory for two reasons, first on account of its excessive suckering, and second, on account of the general similarity of its leaf to that of the named varieties, both Nigras and Americanas, that are budded upon it. To the ordinary grower, the leaf is not sufficiently distinct for him to tell whether or not the understock has overpowered the budded variety, until the tree fruits, and by that time the labor and expense of digging out the tree are very great.

At the date that I planted out my first trees of plums of standard varieties, I also secured a few pounds of seed of plums from the orchard at the University of Saskatchewan. The parent tree was Mammoth, and at that time there were no inferior trees of plums growing in the University orchard, so that all pollen must have been furnished by some variety that was worthy of naming and testing.

These plum trees began to blossom in their fourth year from seed, but spring frosts interfered with the set of fruit for many years, as did late, cool summers that permitted only a proportion of the fruit to ripen properly. As is well understood, plums must ripen in warm weather if the fruits are to be sweet and flavorsome. These two factors prevented me from evaluating the seedlings satisfactorily until this year. The season of 1950 saw a heavy set of fruit, and the unusual heat in September gave most selections a chance to mature in a way that would reveal their high quality. The number of genes for valuable features which were present in the standard plums of 1938, and their dominance over the inferior genes, is revealed by the large percentage of the seedlings that have given fruit of high quality. At least a quarter of the seedling trees have been deemed worthy of allowing to remain in the orchard, a percentage which I take to be large, and which exceeds all my earlier expectations. Three of these trees I intend to propagate. It is not that further varieties of Nigra plums are particularly needed for most of the area where such plums are popular, but rather that earliness is extremely important in our north, and that the three selections are all unusually early. To the present date, Norther has been about the only plum that is early enough to satisfy us. Naturally, we need companions for it in its own class of earliness.

I have cited my experience with these seedlings, not so much to demonstrate how valuable seedlings can be when high quality seed is sown, as to justify my present opinion that own-root plums are the ideal. Nine tenths of my 1950 crop came from the seedlings. They are satisfactory, however, chiefly because there is no understock to overpower them, and because every sucker is a valuable tree.

How can we propagate Nigra and Americana plum varieties on their own roots? They do not respond to ordinary layering, and if the budded trees are planted deep, there will be no re-rooting above the point of union—at least, there never has been any in my orchard. I intended to try a special type of layering this past summer, this consisting of notching the branch to be layered and placing in the wound a little hormone rooting compound, but I failed to find time for the experiment. It should be tried by others too.

The easiest way to make own-root trees on a large scale is by means of the Kerr method of the reversed graft. This method, discovered at the Morden Station by W. L. Kerr, then in charge of fruit investigations, consists of reversing the root-piece at the time of making the graft, and planting the resultant tree in the field with the root-piece upside down. Some root-inducing hormone, intended for the growing tip of the root, must ascend into the scion piece, for soon after planting out the scion piece will begin to produce roots, whereupon the root-piece will rot away and the tree will be own-rooted. I have never known a nursery to take advantage of the Kerr method of propagation, Although the method has been on record in the literature for many years. There is, of course, no reason why someone should not begin.

The proposal for inducing own-rooting does not reduce the incentive for the discovery of new understocks. Someone doubtless has by now tried out the Manchurian plum, Prunus salicina, as an understock, and probably the results will be available soon. The leaf is distinct enough, but the chance of finding only a few suckers is not large. We still need new understocks to try, and further experiments to determine congeniality and climatic adaptation.

FIFTY YEARS OF GARDENING

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brids raised here have been sufficiently outstanding to warrant their being planted elsewhere, even in gardens where an extremely low temperature is not the all important factor in the selection of varieties.

Mr. Skinner owns and operates one of the most northern nurseries for ornamental plant materials in North America. His experiences and observations in growing ornamental woody plants where winter temperatures may go to -50° F. or even lower may prove of interest to Arnoldia readers.

Ladies fashion note: Seldom has so very little been worn by so very many for so very much.—Cedric Adams.

CONVENTION REVIEW

By

Mrs. G. M. Jorgensen, President
S. D. Federation of State Garden Clubs

Mrs. Jorgensen

The 1950 annual convention of the South Dakota Federation of Garden Clubs was unanimously praised as the best in its short history, and the program of the State Horticultural Society was the most noteworthy ever to be heard. Dr. S. A. McCrory, head of the Horticulture Department at State College, was responsible for latter.

A common purpose dominated the convention—to Plant South Dakota—Keep South Dakota Green. The key to this ideal was voiced by Mr. H. N. Dybvig, president of the Horticulture Society. When he urged everyone present to begin at home in his own back yard and garden. If every house becomes a home because of its plantings the whole state will become green with plants and trees.

Our honored National Council guests, led by Mrs. Leonard Slosson, president, echoed the sentiment in urging that we plant and make greater use of our handsome native materials wherever possible, and that we keep alive the gardening traditions of our pioneer horticulturists. Through the park systems of our state we are maintaining and preserving our natural beauty and "Keeping It Green" for future generations, according to Mrs. F. S. Mattocks. Mrs. Parkinson's inspired talk espoused the same cause through our Juniors, while Mrs. Dvorak stressed the planting of natives in connection with our Blue Star Memorial Highway and its markers. Contributing greatly to the inspiration to Plant South Dakota were the dramatic floral creations evolved by Mrs. W. H. Schwentker.

To the Huron and Fair City Garden Clubs is due much praise for the successful handling of the convention, the thrilling entertainment, and the handsome flower arrangements made by the various club members for the general sessions and for all special events. The breakfast table arrangements were breathtakingly lovely. Every member of the two hostess clubs must have put in many hours of labor toward making the convention a success, but the names of a few whose contributions were brought to our attention must suffice.

There was Mrs. Sherman Johnson and Mrs. H. B. Merritt, co-chairmen of the convention; Mrs. A. B. Sanborn who opened her treasured home to guests at the Tea; Mrs. Oscar McFarling and her contribution of flowers and arrangements and last, but not least, the charming and gracious efficiency of Mrs. G. R. McArthur, secretary of the Federation, who was Master of Ceremonies at the Breakfast, and who gave dignity and impressiveness to the beautiful installation ceremony at the close of the convention.

Special mention must be made of the Blue Star Memorial Highway theme of the banquet which was originated by Mrs. Johnson. The Plant South Dakota theme was carried out along a miniature highway at each long table, with Blue Star markers at each place and tiny pin holder favors holding fall "plantings" of flowers. Then there were the thrilling musical numbers by Mr. Clifford Dexter, and the readings by the talented young lady at the banquet, as well as the songs and music of Scandinavia by the lady at the Smorgasbord. The colorful costumes and fantastic array of tempting foods at the Smorgasbord will long be remembered. Mrs. Wm. Ames, chairman in charge, said there were about 70 varieties of tasty tidbits served that night. Remembered too, was the clever skit by the Good Earth Garden Club of Brookings, which added to the merriment.

There were 200 registrations at this meeting with representatives from 26 clubs and reports from several others. We were enormously proud of all 20 of the year books entered in the contest, as well as the two which came too late to enter, and we congratulate the Madison Garden Club, the Fair City Garden Club of Huron, and the Green Fingers Garden Club of Hurley upon scoring the winning points. All winning clubs are comparatively new, but Madison, in first place, boasts of two prizes on their booklets in their year and a half of existence. Our sincere thanks is due Mrs. E. E. Dale, chairman of judging, and the Rapid City Arts Club which studied and listed the points scored by each booklet individually. Points scored were 98, 94, and 91 respectively for the three winners. Mr. Atkinson expressed the thought that "the artistry and thought devoted to these year books bespeaks the heart of the garden club."

We were proud of Elizabeth Crandall, our only Junior representative at the convention, and of the report she gave for her Nature followers of Sioux Falls. We wish more than just a mention could be made of the varied array of arrangements and exhibits brought by Mrs. Albert Duncan of the Green Fingers Garden Club of Flandreau, and of the noteworthy scrapbook made by the Good Earth Garden Club of Brookings. In spite of the fact that we have been in close touch with most of the clubs the past year we were thrilled with their reports which gave a picture of valuable work done by each, and took many notes on them. One report was far too modest—that of the president of the Federation, During the past two years Mr. Atkinson has been mainly responsible for the major accomplishments of the Federation. Working with other state officials he obtained legislative action to name Highways 85 and 85A as South Dakota's Blue Star Memorial Highway to honor all participants in World War I and II. He also succeeded in gaining active co-operation of the State Highway Commission to the Hopa Crab planting project. Congratulations.

Our most heartfelt congratulations also go to Mr. F. X. Wallner for the honor accorded him in achieving the John Robertson Memorial Award for Horticultural Achievement, the highest award in the state; and to Mr. Dybvig as he begins his sixth consecutive term as the wise counselor and president of the South Dakota Horticultural Society.

It was unanimously one of the finest conventions in our history, and I hope each delegate felt the time so well spent that he or she will feel

their club simply must be represented at the next meeting. I hope you have gone back to your club so filled with a spirit of inspiration and enthusiasm that it will be of the greatest benefit to growth and progress of your club. We thank the Huron Garden Clubs and all the individuals who helped make the meeting a happy one. This was the 5th convention to be held in Huron, the town having the honor of entertaining the first convention of the horticulturists in history in 1884, and again in 1887, so we hope this will not be the last.

The New Chairmanships

As to myself—

Never having held the office of president of any organization heretofore, it was with the utmost humility and reluctance that I accepted the high honor as head of this organization. I promise that a sense of tremendous responsibility toward the SDFGC, and a fierce determination to be worthy of your judgment in selecting me will dominate all my actions during the coming administration. With the help of the other members of the Executive Board I shall try to make decisions which will be of the most advantage to the growth and progress of the Federation. To that end I have made several appointive chairmanships and will ask others of you to assume like positions later.

The time is past when you can write to one person in the state for information and news. We are far from being grown-up, but we are now a 1,000-member organization so a change in policy is due, with duties definitely assigned to many helpers. Make use of the following committee chairmen. Write to the individual who is concerned with your problem and allow them each to give you the service of his department. The more often you write to him the greater importance will attach to the office and the chairman will give you increasingly better service because of his usefulness. Keep yourself well-informed concerning the various branches and activities so that you will become increasingly interested and more diligently promote the ideals of the Federation.

Each of the following chairmen will be given space on this page at least twice during the coming year, while your new corresponding secretary, Mrs. L. N. Brakke, Hartford, will conduct the Garden Club Gleanings as has been done in the past. Mrs. Brakke is the one to whom you will write every month sending her the regular news of programs. activities and changes in your official family. Better copy her name and address as well as the following and have at hand when needed.

AWARDS — Mrs. D. L. Beals, Brookings. She is the link between you and possible National Council awards. One award is given to each state for the best flower show in the state. Other awards are given to civic projects, junior achievements, literary productions, conservation and other accomplishments.

BIRDS — Miss Ruth Habbegger, Madison. Ask her for suggestions and ideas for bird study and bird conservation.

BUDGET—Mr. H. N. Dybvig, Dell Rapids, will help manipulate the purse strings so we do not go too deeply into the red.

CONSERVATION—Mrs. L. G. Elsinger, Dell Rapids. Ask her about the Conservation Seals, programs on conservation, and about conservation practices which you can accomplish.

HISTORIAN—Mrs. F. Briley, Mobridge. Send her a brief summary of your progress in a year. This must be your most important news at the end of the year, and must be very brief because it is to be maintained as a historical record over the years. Every club should send one.

JUDGING SCHOOL — Mr. L. S. Bush, Yankton. Schools III and IV will be held immediately after the close of the spring quarter at State College next spring.

JUNIORS—Mrs. H. B. Crandall, 1616 S. Fourth Ave, Sioux Falls. Junior clubs, be sure to let her know who, what and why you are in existence. She will also lend assistance to anyone wishing to organize a junior group.

MEMBERSHIP—Mrs. Leo Monteith and Mr. Wm. P. Snyder, co-chairmen, both of Brookings. A big drive for new member clubs has begun. District chairmen are as follows, but every member of the Federation must be on the alert for prospects. Contact one of the following if you spot a potential garden club member. Districts, chairmen and addresses are as follows: (1) Mrs. Ray Jarrett, Britton, address Newark; (2) Mrs. Andrew Melham, Watertown; (3) Mrs. Sherman Johnson, Huron; (4) Mrs. Gilbert Gilbertson, Brookings; (5) Mrs. Francis Nelson, Hurley; (6) O. A. Grossheusch, Yankton; (7 Mrs. Vern Tompkins, Highmore; (8) Mrs. Clayton Dietz, Groton; (9) Mrs. Al Bastian, Mobridge; (10) Mrs. R. K. Morrell, Pierre; (1) A. R. Schamber, Rapid City; (12) Mrs. Frank McKenzie, Winner.

NATIONAL PARKS AND MONUMENTS — Mrs. G. R. McArthur, Huron. This is a National Council project which we can back in South Dakota with talks and slides. Ask Mrs. McArthur where to get information and slides on 118 parks and monuments.

PARLIAMENTARIAN—Mrs. C. J. Gunderson, Vermillion. She will know all the ansewsr to your parliamentary problems.

PROGRAMS AND LECTURES—Mrs. D. S. Baughman, Madison, will help you with program ideas and sources of slides and materials.

PUBLICITY—Mrs. Lee Thompson, Hurley, will send noteworthy news items to National Council, and to state and national newspapers. Send her your best news.

ROADSIDE PLANTING — Mr John M. Atkinson, Rapid City, is the man to contact when you make plans for roadside plantings of any kind except as arranged with individuals. Please remember the Hopa Crab planting project is a long-range planting plan and actual plantings must be planned to coincide with the State Highway Commission's program, and in most instances cannot be expected to produce immediate results.

SLIDES — Mrs. A. R. Schamber, Rapid City. The slides in her charge will be those taken in our own state for loan to you for a meeting. They will be built up by contributions from you.

TRADITIONS—Mrs. A. W. Davidson, Mobridge. If you know the story, or the source of material on any of our early horticulturists or gardeners, contact her at once.

YEAR BOOKS—Mrs. Oscar McFarling, Huron. Send all year book contest entries to her and get information on points and scoring.

THINGS WE HAVE LEARNED ABOUT PLANTS

By
S. A. McCrory

S. A. McCrory

"Plant South Dakota" is not a new thought because it was one of the first things practiced by the pioneer. In fact, there is plenty of evidence to indicate that the early settler had a greater interest in tree planting than many have had since his time. The tax exemption law of 1869, the tree bounty law of 1885 and the Timber Culture Act of 1873 were early laws encouraging tree planting. The Clark-McNary Act, the state departments of Public Instruction, Game and Fish, Highways and others have made their contribution to planting. As a result of legislation and individual initiative the state had in 1935 about 47,000 tree plantings as groves, windbreaks, school plantings and shelterbelts. These plantings are more heavily concentrated in the eastern one third of the state but for the entire state there is one acre of planted trees for every 200 acres of crop land or one-half of 1 per cent. These are a source of information for other plantings.

After the drought years of the 30's there came a new program in tree planting. New methods were used and extensive plantings were made.

We have learned much in the last 15 years about plants and how to use them. Planting trees for protective purposes required some pioneering to get the most effective arrangement. Contour planting, insect, rodent and livestock protection, cultivation and weed control, locating species according to height and growth habit are all relatively new ideas in tree planting. Five years ago the chemicals used as herbicides destroyed all plant life and in addition left a soil residue that prevented further planting for some time. Then came 2-4-D, followed by many others such as peylmercuric acetate for the control of crab grass. Other chemicals are used to break dormancy, delay growth, prevent fruit drop, regulate the rate of growth and do a host of other things. We have learned a lot about plants and each new discovery suggests many more possibilities.

Does a windbreak provide protection? What is it worth? Investigational work conducted here in the Plains Area by the late C. G. Bates is most interesting. The fuel savings for home heating was the object of one of his studies. An artificial windbreak was constructed at Holdridge, Nebraska from lumber and small houses of identical construction were located at various distances from the protection. This gave exposures to different wind velocities which were measured. Electric heat units with a thermostat control were installed and the amount of electricity required to heat the houses to 70°F was determined. With an outside temperature of -10°F the heat requirement expressed in Btu's was determined at different wind velocities.

Wind Velocity	Btu Requirement
2 M.P.H.	2164
5 M.P.H.	2757
10 M.P.H.	3996
15 M.P.H.	5611
20 M.P.H.	7646

The total over all saving in fuel for the season was 20.9%. This was with a windbreak on only one side. Other studies were made near Huron, South Dakota, Dodge City, Kansas and Fargo, North Dakota. Their findings were very similar with better than 20% fuel saving resulting from wind protection. From these and other studies it is shown that for the maximum benefit a protection on three sides is needed. Where good protection on three sides was provided a savings of 30% in fuel was affected. Private estimates from some homes exceed this figure. As a general statement is may be said that by reducing velocity 40% a savings of one fourth is made in fuel.

Of interest to the stockmen is the savings in feed cost. Some interesting data comes from the Montana Experiment Station. There two herds of cattle were wintered on the open range and were fed the same ration. One group had the benefit of a tree and shrub protection, the other had an open lot with some protection from a shed. The cattle having protection from the tree gained 34.9 pounds per head more during a mild winter and lost 10.6 pounds less during a severe winter than did the cattle not having protection.

At Ardmore, South Dakota, V. I. Clark reweighed two lots of cattle following a three day blizzard. One lot had the protection of some natural trees and shrubs along a stream. This group lost 30 pounds less per head than did those in an exposed pasture.

Much information is available which is based on the judgement and opinion of this group of 86 livestock breeders and feeders in South Dakota and Nebraska who were questioned as to the value of feed saved when livestock were protected by tree windbreaks. Naturally opinions differ but the value of the average annual feed saving was 800 on each of these 86 farms. Fifty-three dairy farmers placed the figure at $600.

Allowing for experimental error and any inaccuracies in estimate by individuals this is a resource of sizeable proportion.

This same windbreak that gives protection to the livestock will protect other parts of the farm. The value of a fruit and vegetable planting is dependent more on wind protection than any other factor. In this state 260 farmers estimated the increases in value of a garden when protected by a windbreak, to be $85.43. Experimental evidence collected during an average year at Brookings is of interest. Vegetable crops grown experimentally under various fertilizer treatments were being studied. Some of the plots were protected by a windbreak. Those protected from the wind gave a greater yield without fertilizer than those receiving good fertilizer treatment when grown beyond the protected area.

It is practically useless to plant fruit trees unless wind protection is provided. When trees or some similar protection is given good quality of fruit can be profitably produced in a home fruit planting. The average per capita consumption of fruit in U. S. exceeds 200 pounds. This represents quite an expenditure for an average family. More fruit crop failure can be credited to wind than

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MR. PORTER'S PLANTS

By
Win Working

(Second installment of an article written for the "Turtle Mountain Star" and published in Oct., 1936.)

W. E. H. Porter

When we visited Mr. W. E. H. Porter on his farm near Hansboro, N. D., recently we had just come from the International Peace Garden and had been talking with directors about scattering tree and plant seeds over the Garden, many of them foreign to this region. We conceived the idea of bringing to the garden seeds of plants and trees from all parts of the world to supplement the international significance of the Garden. We were told that Mr. Porter had raised successfully a great many foreign or exotic plants, but we were not prepared for the remarkable success he has had. We found that from his garden alone enough plants could be obtained to represent virtually all parts of the world. Moreover, they have withstood the rigors of this climate in conditions less favorable than are found in sheltered parts of the mountains. We were shown the different plants and Mr. Porter obligingly gave us the common and scientific names. We shall list a few here and describe them briefly. One very pretty plant was a member of the columbine family, the crimson star gypsophila rojeka (pink), from England. Another was the baby's breath, Europe; the apple of Peru or shoofly, plant (flies avoid it), is obviously from Peru; a parsnip from New Zealand grows to a height of 8 or 9 feet; a syringa, villosa lilac, is from Persia. A plume poppy is a native of China; a less familiar plant Lychnis chalcedonica, Jerusalem cross, is from bleak Siberia. Then there is another Siberian newcomer, Lychnis salmonea, the young plants being raised in the Porter garden for the N. D. Horticultural Society. A more familiar Anthemis kelwayin or Margueritte is a native of Europe; Lychnis coronaria, Rose of Heaven, is from southern Europe; the Lallemantic canescens is from China, has a beautiful blue flower and is a member of the mint family. The Lotus corniculatus, clover family, is from the British Isles originally, but has been grown in the east. Mr. Porter believes his plant is the only plant in the western part of America. There is a hybrid Lychnis, bright red, of origin similar to those others of those listed. A hydrangea tree is from Michigan. The echum, borage is our old friend the forget-me-not. The Echum Bulgaria is the Viper's Bugloss. The former is European and the latter originally from Europe also. There is a plant from the Cape Verde Islands and believed to have graced the "Lost Atlantis," the continent supposed to have been submerged in the Atlantic ocean. There is a member of the Hesperis family, the yarrow, color cerice; it grows in Europe, Asia and North America. There is a phlox divaricata, an evergreen species, a spring bloomer, native to Quebec, Florida and Texas. There is a scented sumac, of North America. A rare species is the Maiden Hair tree, grown otherwise

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GARDEN CLUB GLEANINGS

By

Mrs. L. N. Brakke

Mrs. L. N. Brakke

Convention Gossip. So much has been published in the last two issues of HORTICULTURE about the program for the 67th annual meeting of the S. D. State Horticultural Society and the 7th Garden Club convention, I will not list each speaker, but the new obicers want to take this opportunity to thank each and every one that was on the three day convention program. The theme of the convention, "Plant South Dakota," was carried out in the talks by the different speakers, panel discussions and various club reports. Many thanks to the speakers who came from a distance to make the convention a success. Mrs. Leonard Slosson, Los Angeles, Calif., president of the National Council of State Garden Clubs; Mrs. F. S. Mattocks, second vice president, NCSGC, Boulder, Colo.; Mrs. Wm. Parkinson, regional director, NCSGC, Omaha, Neb., and Mrs. J. E. Dvorak, Nationel Chairman, Sioux City, Ia. Also to the lady from Rapid City, Mrs. O. H. Schwentker, who gave such an interesting talk on Flower Styling, with many lovely arrangements. The two Huron Garden Clubs are to be complimented on their successful convention. The two chairmen, Mrs. S. L. Johnson and Mrs. H. B. Merrit; it takes a great deal of time, work and cooperation on the part of all workers. We don't want to forget the lady that furnished the beautiful flowers used in the decorating of the Elks ballroom of the Marvin Hughitt Hotel, Mrs. O. McFarling.

Mr. F, X. Wallner was very proud of his wonderful display of vegetables and there was a lovely display of flowers by the different garden clubs and some beautiful apples, brot and shown by Mr. A. R. Schamber. Dr. S. A. McCrory, Brookings, acted as toastmaster at the banquet Thursday evening. The table decorations and favors were made, using the Blue Star Highway as the theme. Clifford Dexter favored us with three vocal solos and Blossom Splitek gave two readings which were enjoyed by all, and I am sure no one went away from the table hungry. I was not able to be at Huron for the first half of the convention, but from all reports everyone enjoyed the breakfast, the tea and the smorgasbord very much. The year books were judged by Mrs. E. E. Dale, Rapid City, giving Madison first with 98 points; Fair City club, Huron, second with 95 points and Green Thumb club, Hurley, third with 91 points. Twenty year books from the 35 clubs were entered this year. There were 192 club members registered, 91 delegates from 26 clubs, 4 regional delegates and 19 state officers. Horticultural officers elected were:

President—H. N. Dybvig, Dell Rapids.

Vice Pres.—Russell Rulon, Yankton.

Secretary—W. A. Simmons, Sioux Falls.

Treasurer—F. X. Wallner, Sioux Falls.

Librarian—Mrs. L. G. Elsinger, Dell Rapids.

State Garden club officers elected were:

President—Mrs. G. M. Jorgensen, Dell Rapids.

First Vice Pres.—Mrs. F. Briley, Mobridge.

Second Vice Pres.—Mrs. Leo Monteith, Brookings.

Cor. Secretary—Mrs. L. N. Brakke, Hartford.

Rec. Secretary—Mrs. H. B. Merritt, Huron.

Treasurer—Mrs. R. B. Berry, Sioux Falls.

Anyone wanting information from the different officers and committee chairmen, write to them direct, sending self-addressed stamped envelope for reply. Don't forget to send in the names and addresses of your new officers and don't forget your dues, to be sent to Mr. Simmons.

The Huron Garden club suffered the loss of one of their members, Mrs. F. C. W. Kuehn passed away Oct. 9th. She helped make all those lovely flower favors, used at the convention banquet, They also held their annual "Guest Day" chrysanthemum tea, Oct. 13th. The Green Fingers Garden club, Flandreau, are planning their new year books. Mrs. Cherney says their club has joined the National Tulip Society and are expecting to use some slides or movies at their next meeting. All the garden clubs in Sioux Falls gathered at the South Sioux Falls town hall Thursday evening, Oct. 12th. About 100 persons enjoyed the potluck supper. Mr. Wm. H. Snyder, State Extension Horticulturist, Brookings, gave a talk on "House Plants" and their care in the home. Mr. F. X. Mallner was honored on receiving the John Robertson medal award at the convention, and the citation was read by Mr. Limmer, who acted as chairman of the meeting. Several varieties of mums, plants and oddities and grain were on display. Yours truly was one of the listeners. New officers elected for the coming year at the In and Outdoor Gardening club were president, Mrs. Anton Hyden; vice president, Mrs. Paul Weber, and secretary-treasurer, Mrs. V. Volin. Their project is to landscape the "Ell" at the Woman's building at the Empire fair grounds. The club held a Chrysanthemum Tea at Mrs. H. B. Crandall's home Oct. 14th, each member bringing a mum arrangement. Mrs. Crandall and Mrs. Cashman were on the program with organ and piano duets. They are planning to sell their extra plants and bulbs to raise money for the club treasury. New officers for the Lyons club all have Colton addresses again. Mrs. Elmer Walker president, Mrs. Grace Hamre vice president and Mrs. T. D. Nelson secretary-treasurer. New officers of the Canton Garden club are:

Mrs. G. H. McAnally, president.

Mrs. C. H. Dulaney, Vice Pres.

Mrs. F. H. Diekman, Sec.-Treas.

I just received word that Mrs. Sherman Johnson of the Huron Garden club, passed away very suddenly on Oct. 21st from cerebral hemorrhage. Survived by her husband, a son and a daughter. Marie was a very active member of the Huron Garden club and was one of the committee that put on the Horticultural and Garden club convention at Huron last month. We are sorry to hear of her death and our sympathy goes to the bereaved family. To which Mrs. Jorgensen adds: No illness preceded the tragedy and she was cheerful and busy as usual up to the moment she was stricken. She had been helping with the annual mum Tea, sponsored

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FRUIT AND VEGETABLE NOTES

By
F. X. Wallner

F. X. Wallner

There have been many complaints of late that I am not at the market and the boys are so busy in the fields that they cannot be at the stand, to take my place. First it was the three days at Huron, attending the annual meeting, the last week in September. Then the second week in October, Monday, away all day at Brookings, attending the funeral of Dr. Hansen; Tuesday, the important liquor election in South Sioux Falls; Wednesday, part of the afternoon at the Wednesday Garden club; Thursday, off early for the potluck supper at the South Sioux Town Hall, for the five Garden Clubs in Sioux Falls. But from now on until the cold drives me inside, I promise to be on the job from early morning till late at night. We surely are thankful for the nice weather of the past week and with a fairly large crew, they expect to get the potatoes under cover in another day. Onions also are all inside but are still to be topped, several loads of cabbage still to be cut, a few baskets of cauliflower came in today. This is the first year we have had caulflower most of the summer months. Carrots and parsnips are still to be dug and brot in, also 12 rows of nice Ohio potatoes to be dug at the home place and it is four days after the deadline for potatoes, according to Sec. Fitch, of the Iowa potato growers. Mrs. Brakke, of the Lyons club, had some beautiful cobblers potatoes at the Huron convention, that were grown from our stock B size seed that I sold for $1 per bag. When the boys saw the potatoes they were sure I gave her the B size foundation stock seed that we were to plant and cost $3 per bag. But our best potatoes this year are not the white nor the Ohios altho both are very good, but a new red variety, the Pontiac. It does not have the deep eyes of the red Bliss triumph or the Warba. The red potato is the most popular, even so much so that they now use a red coloring in washing and waxing. Sec. Fitch, of the Iowa Growers, states that he is willing to let the ladies settle the question. Well Mr. Fitch, I have heard several complaints from women that the red water from the boiling of these painted potatoes is very objectionable and a mess. Oct. 14th. This Saturday winds up the potato digging and the potato pickers earned over $700 this week, but we were certainly thankful for the week's nice weather and no freezing to damage the potatoes. The 20th winds up the carrot harvest, also one of the best, of uniform nice sized roots. The parsnips are a near failure, as the roots are only half size. I had hopes they had time, since the September rains, to make fair size roots but the time was too short and the dry spell too long, during the late summer months. It is a crop that should be where they could be irrigated. While on the subject of newer varieties of potatoes, here is an Agricultural Dept. release on some of the varieties that we may be growing in the near future:

"The value of recent work in potato breeding is reflected in the quantity of certified seed produced last year, says the U. S. Dept. of Agriculture.

Growers of certified seed potatoes set new records. The total production approached the 50 million bushel mark (48,575,155 bushels), an increase of more than 4 million bushels over the 1947 record. Also there were two new records in production of certified seed from the "new" varieties that have been introduced as a result of the potato breeding program in which the Dept. is cooperating with the agricultural experiment stations in 35 states.

The production of certified seed of these new varieties totaled 21,563,661 bushels. This not only set a new record in total production of seed of new varieties, but also marked an advance in the proportion of the total crop. In 1948 the new varieties accounted for more than 44 percent of the total certified seed crop. As recently as 1945 only about 30 percent of the certified seed was of the new varieties.

Katahdin continues as a bright star of the new potato list, as a result of (1) its excellent quality, (2) disease resistance, and (3) its wide adaptability. For the second year it led the list. In 1947 it passed the popular old favorite, Cobbler, by about a million bushels. But in 1948 Katahdin production was up from 11,292,752 to 13,385,278 bushels. Cobbler was down from 10,270,257. Kadahdin accounts for 27.5 per cent of all certified seed potatoes, and nearly equals the combined production of the two leading varieties. Cobbler with 15.47 percent and triumph with 13.31 percent.

On a percentage basis, the most rapid increases in production are reported for several of the newer varieties, notably Dakota Chief, Essex, Ontario, Pontiac, Pawnee, LaSalle and Teton. Reduction in production is reported for other of the new varieties which have already been superseded by still better selections from the breeding plots."

NEWSLANTS

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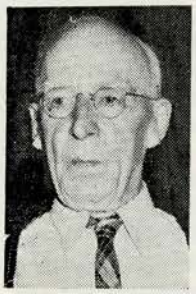
his impression of varieties, telling of his experience with top-working, etc. This tour was a fitting climax to a good meeting. Ernest Biel and party joined the tour at the Wodarz orchard. They were unable to attend the Friday meeting.

Miscellany: Mrs. Henry Biel and two of their three daughters accompanied Henry to the meetings. It was the first trip for the ladies to the Red River Valley. . . . The new Valley Garden Club of Larimore was represented by Mrs. Selmer Moen, Mrs. John Shide and Mrs. Martin Shide. . . . Eric Sochting of the Northwest Nursery Company at Valley City made many informal contributions to the meetings. . . . To my knowledge, this was the first meeting missed by either E. C. Hilborn of Valley City or George Will of Bismarck since the present society was formed in 1923. . . . Faithful member A. F. Nagel represented the Lisbon area. . . . Frances Kannowski of Grand Forks, Bill Page, same address, A. L. Truax of Crosby. Geo. Simons of Cooperstown, T. M. Mc Call of Crookston and Melvin Bergeson of Fertile were some of the folks we had hoped to see but who found it impossible to attend.

Eat a balanced ration to keep in good health.

SECRETARY'S CORNER

By
W. A. Simmons



W. A. Simmons

Under date of Oct. 3rd, Mr. J. W. Valentine of Willow Lake, writes as follows: "We have had 8.80 inches of rain here since Sept. 20th, and it gives our trees, etc., a good drink for winter. It has been very dry here this spring, summer and fall. A heavy snow is falling today with all trees in full green and had a heavy killing frost last nite. Am wondering how the trees will take it." October 5th. Today came the news we had long dreaded to hear, the passing of our friend of many years, the great plant breeder Dr. N. E. Hansen at the age of 84. His was a life of vast usefulness and great achievement that added wonderfully to the list of hardy and desirable fruit possible to be grown on the great plains. Without his originations our fruit list would be poor indeed. It is gratifying that these have been brot together in the Hansen orchard at State College, Brookings, where we may study them and perhaps rescue many varieties that have been somewhat passed over and that deserve more general planting. This has come about by there being so many of them. As the Hon. Francis Case so aptly put it: "As long as people live in the northern great plains, life will be richer, farming will be more secure and the average prosperity will be greater because Dr. N. E. Hansen lived and did his creative work." Scientists at the U. S. Dept. of Agriculture research center at Beltsville, Mr., have found that ultra high frequency sound waves, which cannot be heard by humans, will knock off the corn borer moths, reports ,'Successful Farming" magazine They also work on mosquitoes, and some bacteria in milk can be destroyed by sound waves. Now the scientists are busy bombarding hybrid seed corn to see if they cannot speed up germination and increase yields. HORTICULTURE, Under date of Oct. 15th Mr. Chas. Collier of Ipswich writes: "Fair to poor crop in 1950. Rainfall to date 12.57, way below normal but better than 1949." Our friend Dr. G. F, Will of Bismarck has done much interesting work in dating the Indian villages by means of the tree rings on the logs that were used in the framework of their houses and which escaped the fire that consumed most of the structures because of being set in the ground. Another method has been developed in the east, according to an article in TIME, as follows: "U. S. archeology is mostly concerned with Indians who are more appreciated now than in the early settler's days. Dr. Wm. A. Ritchie, New York archeologist, told how he dated Indian remains by means of carbon 14 in charcoal from long-dead campfires. Carbon 14, faintly radioactive, is formed in the upper atmosphere by cosmic rays. All carbon in living things contains a tiny amount of it, but after the death of an organism, its carbon 14 gradually disintegrates; half of it disappears in about 5800 years. The amount that has disappeared is a reasonably accurate measure of the object's age. Tested in this way, by Drs. W. F. Libby and J. R. Arnold of the University of Chicago, one sample of charcoal from a buried campsite in Schuyler county proved to be about 5400 years old. Most previous estimates had given the Indians only 2000 years in New York state, but Dr. Ritchie's finding seemed to indicate that rather primitive redmen lived there in 3450 B. C., when the neolithic inhabitants of northern Europe were not much more advanced." This would make the early visiting Norsemen and our own Pilgrims seem like Johnny-come-lately's. Oct. 27th. Our fine weather continues, most days requiring no heat in our homes and not getting down to freezing at night. The mums that Mr. Wallner contributed to the Y. flower beds are in their glory, seeming unaffected by the mercury's occasional descent below the freezing mark. The weather man seems to want to make up for the cold summer by giving us a good warming up before delivering his Sunday winter punch. New tools are constantly coming to us in our battle with insects, some of them are described in this Dept. of Agriculture release:

"Some kinds of insect pests in greenhouses found new perils in their lives last year, and this year is likely to prove even more fatal.

U. S. Dept. of Agriculture entomolobists report tests of several new phosphorus compounds that are deadly to mites, aphids and other pests that have been hard to control with more familiar insecticides.

The effect of one of the new ones appears to make a plant deadly to the insect that plagues the plant. The chemical can be applied to or mixed with the soil. It then seems to be taken up by the plant, and aphids and two-spotted spider mites feeding on the plant are killed.

In these studies the investigators are men familiar with the perils of the work, and they make use of gas masks, respirators and especially treated protective clothing to reduce the dangers that are unavoidable in making the studies. Obviously, they say, such chemicals are not safe for general use by inexperienced persons, any more than hydro-cyanic gas as used for fumigation by licensed specialists only.

The experimenters know they will need several seasons of practical experience to gain knowledge of the powers and perils involved in the use of these new compounds. Principal subjects of concern are the perils to users in the application of the insecticides, and—even more important—the dangers to the public. Some of the new phosphorus compounds may prove highly desirable for flower crops, but may be unsafe to use on such food crops as greenhouse-grown tomatoes and cucumbers.

On the other hand, continued experience and study of these new phosphorus compounds may make it possible to develop still other new chemicals that are less hazardous."

THE GROVES

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underbrush that hides God and the sun;

TO OUTLIVE EVERY HINDERANCE, for while fire, storms and lightning kill other trees, he survives

And never stops Growing."

—This posted on Redwood tree at Lanes Redwood flat, near Ukiah, Calif. Copied by Judge J. T. Medin.

SOUTH DAKOTA'S STATE PARK SYSTEM

By
Harry R. Woodward
State Forester

H. R. Woodward

That our state park system, with the exception of Custer, is in its infancy is common knowledge to all of you. However, let us discuss briefly the short history of this system so that we may all understand better the many ramifications of the program. In 1945 the legislature directed the Game, Fish and Parks Commission "To acquire by gift, purchase, or condemnation, improve and manage other land areas suitable for park purposes in various portions of the State so that a comprehensive State park system may be established."

This was a very general directive and so to further assist this commission in carrying out these provisions and others, the legislature set up the State forestry policy and laws as follows:

"Whereas it is recognized that,

(a- Attractive out of doors areas providing opportunities for relaxation and recreation are fundamentally necessary to maintain a healthy, sane and contented citizenship, that

(b) Beautiful highways and artificial lakes added to the natural beauty of State parks, forests and natural lakes attract multitudes of visitors and therefore provide sources of substantial income and prosperity to South Dakota citizens; that

(c) The growing and conservation of trees and forests, on lands more suitable for this than other purposes, increases wildlife shelter, affords opportunities for better distribution of birds and game in larger variety, brings about better use of the land, produces wood and timber products for South Dakota needs, creates employment, and contributes to a happier, more prosperous state; that

(d) The importance of an enlightened forestry program to the State of South Dakota justifies the employment of skilled foresters in administration and management;

Now, therefore, it is declared to be the policy of this legislature to,

1. Consolidate the administration of South Dakota forestry and park activities in the Department of Game and Fish under the direction of a technically trained State Forester,

* * * * *

to (3- Increase and develop and where practicable consolidate the forest lands of the State through acquisition, planting, care, and exchange to permit effective administration and use;

to (4) Develop and maintain community forests, parks and recreational areas around natural and artificial lakes and other advantageous spots on state, county and municipal lands, in cooperation with local authorities."

* * * * *

The legislature next directed that:

"Under the direction of the Game and Fish Commission the State Forester shall supervise and direct the planting, development, protection, management and care of state and community parks, including Custer State Park, other State parks and forests, camp sites and recreational areas upon state, county and municipal lands around artificial lakes and elsewhere throughout the state."

* * * * *

that "The State Forester shall cooperate with county and municipal authorities in the development of a program of beautification and care of roadside, forest and park plantings along county and municipal highways, the cost of which will be borne by county or municipal funds."

With these directives in mind the Commission embarked on this program by employing a State Forester in November of 1945. Work progressed rapidly in 1946 and localities were quick to present their requests for State parks. Whenever feasible projects were presented, the Commission rapidly accepted them into this expanding system. Some areas were relatively small and some will require many years of development and planting. A brief five years later we see that the system has grown to include 8 State parks, 8 State Recreation areas, 8 cooperative Recreation areas, and 17 Recreation development areas.

During this period of development the principal emphasis has been necessarily on tree planting of which there are now 471 acres in all of these parks. However, during this period the Park Supervisors have found time also to build approximately 250 picnic tables, 175 fireplaces, and 75 toilets. Other developments have included landscaping areas, building interior roads, erecting equipment storage buildings, developing water, and many other miscellaneous items. These have all been accomplished in addition to the maintenance which, including tree care and cultivation, is still the largest end of this work.

It would be quite presumptive for me to predict what the accomplishments might be in the program in the ensuing five years. but perhaps we could discuss general plans and policies which may give some indication as to the ultimate in South Dakota's State parks. In the first place the finances supporting these parks comes from game and fish revenues which are bound to fluctuate and from present appearances may drop seriously in the near future. These game and fish revenues also have many higher priority commitments, and at best the State parks can only expect to participate in surplus funds. This means that a supplemental appropriation by the legislature may be necessary in order to properly maintain our parks. Undoubtedly the next session of the legislature will have to give some consideration to the matter.

In the matter of planting, I stated that we have 471 acres now planted in trees and shrubs. Considering only the existing projects it is quite possible that another 500 acres could be added to this figure in the completion of present plans and projects during the coming 5-year period. This is all of course subject to the availability of finances. If new park projects were to be added, this 500 acre figure will be expanded accordingly. I will not delve further into the mechanics of our planting program, because you are all somewhat familiar with the species and types of plantings we are making, but I will state that our principal aim now is to plant hardy shade-producing trees and shrubs. The refinements of landscaping with

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FIFTY PEARS OF GARDENING IN NORTHERN MANITOBA

By
Dr. F. L. Skinner, Dropmore, Manitoba, Canada
(From Arnoldia, publication of the Arnold Arboretum, Harvard Univ.)

Though much progress has been made in gardening during the past fifty years, there is still much to do. Many of the trees and shrubs of northeastern Asia, with northern limits in Kamchatka, eastern Siberia, Saghalien and northern Korea, have been introduced to cultivation from their southern or insular limits and may prove much handier when secured from colder and drier districts. Syringa japonica, introduced to cultivation from Saporo in the north island of Japan by Professor Sargent, is the only broad-leaved tree or shrub from Japan that has proved fully hardy here. Possibly others from the same neighborhood would repay a thorough trial. While we have a small company of very enthusiastic plant workers in western Canada who are doing much to improve our fruits, vegetables and flowers by plant breeding, there is still much more to do than they can hope to accomplish. Personally, I would like to see some of the following plants introduced: a hardy weeping willow, a pyramidal poplar, a double-flowered Malus baccata, large-flowered dogwoods, buckeyes with bright-colored flowers (the Ohio buckeye is quite hardy), and truly hardy viburnums with the fragrance and beauty of Viburnum Carlesii.

A complete list of hardy bulbs and herbaceous perennials that are grown at Dropmore would be wearisome, so I will mention only a few of the more outstanding that are finding their way into our northern gardens by way of Dropmore. In early spring we have Callianthemum augustifolium with its pure white buttercups, and Viola altaica that becomes a mat of cream or yellow pansies (early blue) in early May. These are hybridizing with the garden violas to give what I hope will be a race of quite hardy pansies. Towards the end of June or early July, Iris Kaempferi from Manchuria and Iris acutifolia, which came to me from Leyden Botanic Gardens, are among the most striking flowers in the garden. There is Ligularia speciosa with enormous elephant-ear leaves and 15 to 18 inch spikes of orange yellow flowers. Chrysanthemum Zawadskii from Austria, though rather a disappointing daisy that is scarcely worth growing on its own account, has given me some hybrids that are both hardy and beautiful. (It is interesting to note here that the inspiration I got from a visit to Alex Cumming of Bristol, Connecticut, started me breeding chrysanthemums.- Muscari polyanthum is also quite at home and towards the end of May, Tulipa Ostrowskiana (scarlet- and T. Kolpakowskiana (yellow make brilliant patches of color. In early June the white narcissus of the Swiss Alps comes into bloom. This was collected for me by Henry Correvon, high above Montreux, about 25 years ago, and is the only narcissus that really does well here. Then as the German iris starts to flower, we have Allium zebdanense (pure white and the blue I xiolidion montanum. These two make a lovely picture when grown together. Lilies of course are grown by the acre at Dropmore, and our collection of these is being augmented yearly. That, however, is a story in itself.

While my work with plants has been done entirely with a view to securing forms suited for this region, it is interesting to note that some of my hybrids are beginning to find a place in widely separated gardens of the world. It is a great satisfaction to know that some of the new hy-

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SOUTH DAKOTA'S STATE PARK SYSTEM

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finer types of shrubs, trees and flowers will come later when the basic requirements of recreation have been met.

Admittedly we are at the present time overextended by having many small plantings widely scattered which involves long trips with machinery and men. This results in costly and not too satisfactory a job. Future plans most undoubtedly will call for consolidation of plantings closer to the headquarters area. This means that over a long period, headquarters for maintenance personnel may have to be moved from time to time as one planting becomes established and another is started. A new and highly satisfactory solution to this and other problems which is now being used in several areas is the Cooperative plan whereby the county, municipality, or other organization agrees to carry the basic load of caring for trees and maintaining the recreation area. In this case, we plant the trees, install the recreation facilities, and give technical assistance where needed, while the local agency carries all the rest of the responsibility. The philosophy that "God helps those who help themselves" also seems to fit advantageously into this state-local cooperation picture. Experience has shown that where the state has carried the full load of the areas, the local people are inclined to lean back in their swivel chairs and query, "Who doesn't the State do more for us?" Thus the ultimate results through cooperative effort promise to be a more satisfactory solution to successful operation of a statewide park system.

I am optimistic for the future of our State parks. In this short period during which we have been in operation the attendance at the parks has gone from zero to 273,000 persons and 84,000 cars in 1949, excluding the Custer State park. This figure may well double for 1950. Already this year a 5 week check on one park revealed a daily average of 184 cars and 600 persons. With such an obvious use of present facilities, I believe that the people will see to it that their State, county and municipal leaders are properly cognizant of the importance of parks. If revenues are available I am certain that the Game, Fish and Parks Commission will continue to pursue a positive program in the development of these recreational areas. If Game and Fish revenues decline, I am equally certain that our legislature will supplement the program by making annual appropriations for the maintenance of these areas.

GARDEN CLUB GLEANINGS

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by her Garden club and had picked armloads of lovely blossoms to help decorate the Dexter home where the Tea was held, saying she would be back later. She was stricken suddenly late that day and died without regaining consciousness. Mrs. Johnson's death is the second loss for the Huron Garden club within a month, and the fourth loss among its 24 members in two years. She organized the club, the first Garden club in Huron and was its first president and was a leading exponent of gardening and of giving joy to others, thru it. Mrs. G. R. McArthur says: "We are all greatly saddened. She was one of Huron's true ower lovers for she always had loads of bloom and shared them generously with everyone." Her death is a tragic loss to all who knew her.

MR. PORTER'S PLANTS

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only in China, that is it grows wild only there. It is believed to date from ancient geological times. It is expected to serve as a substitute for the American elm. A carol lily which made a brave showing in the garden is of the Climax family, Europe and America. The saponaria is only the soapweed, pink, of Europe. Next Mr. Porter pointed out a rockcress plant, southern Europe. The Veronica spicata, purple, was there representing northern Europe and Asia. The giant daisy was also present; it has many cousins in nurseries of the state, and is from Siberia; it is known in the classrooms as Campanula rapunculoides. The Tamarisk petandra is the flowering cedar, from the desert of Arabia. The Daphne cneorium, allied to the Rhododendrum family, from the mountains of Europe. Then we saw the moreheim blue spruce of Holland and the English blue geranium. The Erigeron, fleabane, native to this country. These are but a few of the things Mr. Porter had in his garden, the enumeration of which would only tire the reader.

No man owns anything to the extent that he ceases to be responsible to his fellow man for the conservation and right use of his property.—Market Grower's Journal.

Nursery slogan: We don't grow trees to sell, we sell trees to grow.

THINGS WE HAVE LEARNED ABOUT PLANTS

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any other cause. Restriction of insect activity at blossom time, the drying influence on blossoms, mechanical injury to fruit and foliage as well as breaking of the trees are all a result of wind. A half acre planting of well selected fruit varieties can be worth many dollars in food produced.

Does a field shelterbelt pay a farmer for land taken out of crop production? Certainly every farmer planning this move is entitled to know if it will be profitable. Experimental results with shelterbelts are of course general and may not apply to all conditions. Wind has certain obvious mechanical effects upon crops. Lodging or blowing down of maturing crops is one. Another is the blasting of small or germinating crops. Uncovering seeds by wind erosion is not uncommon. The exact value of a shelterbelt to crop yields were made in eastern North and South Dakota between the years of 1935 and 1941. This was perhaps the most thorough study ever made. One hundred-thirty separate fields, each protected by a shelterbelt on one side or another, were studied. These were about equally divided between corn and small grain. Each field was sampled separately and there were no comparisons between a protected and an unprotected field. Applying the information available as to the protection a shelterbelt would give, the fields were sampled at intervals by starting at the inner row and continuing at right angles to it until a distance 20 times the height of the belt had been reached. While there is perhaps some benefit beyond the 20-H zone this was considered out of the protected area. Assuming that all fields were uniformly seeded the protective capacity then can be evaluated. This could be expressed in bushels but the workers chose to express it in acres. To illustrate, if the field and shelterbelt are each one-half mile long, increasing production enough to equal one acre is the same as adding one rod to the width of the field. When gain is expressed in this way it shows if the belt is paying for the space it occupies. Since a planting may be arranged so as to influence the crop on any one of four directions their positions were studied. They can be described in four sentences.

1. From 30 east-west belts studied crop yields were increased to the equal of 4.24 rods. South.
2. Nineteen north-south belt gave crop increases on the east equal to the yield of 1.98 yards.
3. To the west 22 belts running north-south gave no net increase in yield.
4. Fifty-eight east-west belts gave increases in yield to the north of them by an amount equal to 1.68 rods of land.

This favors the east-west belt arrangement and if it is so located as to give the field the benefit of both north and south protection, 5.92 rods of land would be added to the field by way of yield. Since the maximum benefit is on the south it no doubt is associated with snow-holding. Another item is the greater warmth of soil in early spring while the northerly winds predominate.

In addition to the benefits an individual may receive there is a community value. This benefit may be social as well as economical. Trees dress up the landscape, the farmstead and the highway. They give the community the appearance of permanence. They are definitely not a part or associated with the settler who hopes for a few good crops in succession and then expects to pack up and move on.

Finally let us remember some of the events of the 30's when much of our top soils were blown away. A shelterbelt is the protection we have to prevent this.

MANITOBA NEWS LETTER

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is, Alberta and Anaros in crabapple. Most other named varieties under test bore from a few fruits to less than a half crop.

Pears performed exceptionally well. A medium to heavy crop was carried by nearly all varieties. Most noteworthy were Golden Spice, Tait-Dropmore, Tioma, Olia, Frostovisky and Pioneer No. 3. The Ussurian and Sand pears were vary productive.

Rosybloom crabapples are cultivated here or their ornamental value. The fruits of many varieties are bitter. However, some bear large crabapples of pleasing flavor. Such are appreciated for making sauce and jelly. Some hybridizing is being done to incorporate the attractive red coloring and high pectin content of these rosyblooms in culinary crabapple and apples.

Fireblight flared up in late spring here and there in the orchard. In most cases the disease faded out in practice is to eliminate varieties which prove very susceptible to this the twig portions of tree. Local destructive bacterial enemy. Examples of varieties discarded for that cause are Transcendent and Gipsy Girl.